

Product Name: 2,6-DMP Acid
Issued: Dec-18-2012

SAFETY DATA SHEET

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Product Name: 2,6-DMP Acid
Chemical Name: 2,6-Dimethylphenoxyacetic Acid
Synonyms: A-Wing: Wing A: Lopinavir Intermediate
Drug Code Number: 12389

1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended use: Process Intermediate

1.3 Details of the supplier of the safety data sheet

Supplier: AbbVie Inc.
1 North Waukegan Road
North Chicago, IL 60064
USA
1-800-255-5162
+1-847-937-7433

Customer Service Telephone: 1-800-255-5162 (US and Canada only)
+1-847-937-7433

E-mail Address: AbbVie.SDS@abbvie.com

1.4 Emergency telephone number

Emergency Telephone: CHEMTREC: 1(800) 424-9300 (in USA and Canada)
or +1-703-527-3887 (international)

Section 2. Hazards identification

2.1 Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute oral toxicity Category 4
Serious eye damage/eye irritation Category 1
Chronic aquatic toxicity Chronic toxicity 3
None

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Indication of danger: Xn - Harmful
Xi - Irritant

Risk Phrases: R22 - Harmful if swallowed
R41 - Risk of serious damage to eyes
R52 - Harmful to aquatic organisms
R53 - May cause long-term adverse effects in the aquatic environment

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Section 2. Hazards identification

2.2 Label elements



Signal Word: Danger

Hazard Statements: H302 - Harmful if swallowed
H318 - Causes serious eye damage
H412 - Harmful to aquatic life with long lasting effects

P270 - Do not eat, drink or smoke when using this product
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician
P273 - Avoid release to the environment

2.3 Other hazards

Not determined

Section 3. Composition/information on ingredients

| Chemical Name | Percent | EINECS/ELINCS Number | EEC Classification | EU - GHS Substance Classification | REACH No. |
|----------------------------|---------|----------------------|------------------------------|---|-----------------------|
| 2,6-DMP Acid 13335-71-2 | 100 | NA | Xn; R22 Xi; R41 R52-53 | Acute Tox. 4 (H302) Aquatic Chronic 3 (H412) Eye Dam. 1 (H318) | 01-0000017715-66-0000 |

Not Hazardous* - Based on available data, not classified as hazardous according to the criteria of the Globally Harmonized System.

For the full text of the R-phrases mentioned in this Section, see Section 16
For the full text of the H-Statements mentioned in this Section, see Section 16

Section 4. First aid measures

4.1 Description of first aid measures

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Eye Contact: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

Skin Contact: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

Inhalation: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

Ingestion: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

Protection of First-aiders: Use personal protective equipment

4.2 Most important symptoms and effects, both acute and delayed

Signs and Symptoms: Direct contact with the eyes could result in the following: Irritation

Medical Conditions Aggravated by Exposure: None known from occupational exposure.

4.3 Indication of any immediate medical attention and special treatment needed

Notes To Physician: Treat symptomatically

Section 5. Firefighting measures

5.1 Extinguishing Media

Suitable Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire

Unsuitable Extinguishing Media: Not determined

5.2 Special hazards arising from the substance or mixture

Special Exposure Hazards: Not determined

5.3 Advice for firefighters

Protective Equipment and Precautions for Firefighters: As in any fire, wear self-contained breathing apparatus and full protective gear

Section 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions: For personal protection see section 8

6.2. Environmental precautions

Environmental Precautions: Contain material and prevent release to waterways or soil.

6.3. Methods and material for containment and cleaning up

Methods for Cleaning Up: Recover product and place in an appropriate container for disposal.

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6.4. Reference to other sections

Refer to Sections 8, 12, and 13 for further information.

Section 7. Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Store according to label instructions

7.3. Specific end use(s)

Recommended use: Process Intermediate

Section 8. Exposure controls/personal protection

8.1. Control parameters

Exposure limits:

| Chemical Name | Employee Exposure Limit | Skin Notation |
|----------------------------|--------------------------------|----------------------|
| 2,6-DMP Acid 13335-71-2 | Not Applicable | None |

8.2. Exposure controls

Engineering Controls: Local exhaust ventilation as necessary to maintain exposures to within applicable limits.

Respiratory Protection: An approved respirator (i.e. NIOSH, EN, etc.) should be worn when exposures are expected to exceed the applicable limits.

Eyes: Wear eye protection appropriate to handling activities.

Gloves: Impervious gloves.

Other PPE Data: Wear appropriate body coverings if contact may occur.

Environmental Exposure Controls: Not determined

Section 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance: White to tan Powder

Odor: Not determined.

Odor Threshold: Not determined

pH: Not determined.

| | |
|---|--|
| Product Name: | 2,6-DMP Acid |
| Issued: | Dec-18-2012 |
| Boiling Pt. @ 760 mm Hg (°C): | 284-316 without decomposition |
| Melting/Freezing Point (°C): | 135-138 without decomposition |
| Flash Point (°C): | Not determined. |
| Evaporation Rate at 20°C: | Not determined. |
| Flammability (Solid): | Not determined. |
| Lower Explosive Limit: | Not determined. |
| Upper Explosive Limit: | Not determined. |
| Vapor Pressure (mm Hg): | 0.00000065 at 20 deg. C |
| Vapor Density (Air = 1): | Not determined. |
| Specific Gravity: | 1.2543 at 20 deg. C |
| Solubility(ies): | Soluble in: organic solvents. methylene chloride, acetone. |
| Partition coefficient: n-octanol/water | Not determined. |
| Autoignition Temp. (°C): | Not determined. |
| Decomposition temperature (°C): | Not determined. |
| Viscosity (centipoise): | Not determined. |
| Explosion Severity: | Not determined. |
| Oxidizer Properties: | Not determined. |

9.2. Other information

Not determined

Section 10. Stability and reactivity

10.1. Reactivity

Not determined

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

Hazardous reactions: Not determined.

10.4. Conditions to avoid

Not determined.

10.5 Incompatible materials

Not determined

10.6 Hazardous decomposition products

Not determined.

Section 11. Toxicological information

11.1. Information on toxicological effects

Routes of Exposure:

Oral: Not determined.

Dermal: Not determined.

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Inhalation: Not determined.

Acute Toxicity - Oral: Data for component (s) given below.

| Chemical Name | Acute Test | Value | Units | Species |
|----------------------------|------------|----------|-------|-------------|
| 2,6-DMP Acid 13335-71-2 | LD50 = | 250 | mg/kg | Female Rats |
| | LD50 > | 375 <500 | mg/kg | Male Rats |

Acute Toxicity - Dermal: Data for component (s) given below.

| Chemical Name | Acute Test | Value | Units | Species |
|----------------------------|------------|-------|-------|---------|
| 2,6-DMP Acid 13335-71-2 | LD50 > | 2000 | mg/kg | Rats |

Acute Toxicity - Inhalation: Not determined.

Corrosivity: Not determined.

Dermal Irritation: Did not produce skin irritation in rabbits.

Eye Irritation: Produced severe eye irritation in animals. Produced corneal damage in rabbits.

Sensitization: Negative in guinea pig sensitization studies.

Toxicokinetics/Metabolism: Not determined.

Target Organ Effects: Not determined.

Reproductive Effects: Not determined.

Carcinogenicity: Not determined.

Mutagenicity: Not determined.

Aspiration hazard: Not determined

Notes:

1. ALD: Approximate lethal dosage
2. LC50: Concentration in air that produces 50% mortality
3. LD50: Oral or dermal dosage that produces 50% mortality

Section 12. Ecological information

12.1. Toxicity

Data for component (s) given below.

| Chemical Name | Percent | LC 50 (mg/l) | Species | Duration |
|----------------------------|---------|--------------|-------------------|----------|
| 2,6-DMP Acid 13335-71-2 | 100 | 45.91 | Brachydanio rerio | 96 Hours |

| Chemical Name | Percent | EC 50 (mg/l) | Species | Duration |
|----------------------------|---------|--------------|---------------|-------------------|
| 2,6-DMP Acid 13335-71-2 | 100 | >100 | Daphnia magna | 24 hours 48 Hours |

| Chemical Name | Percent | EB 50/ErC 50 (mg/l) | Species | Duration |
|---------------|---------|---------------------|---------|----------|
|---------------|---------|---------------------|---------|----------|

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| | | | | |
|----------------------------|-----|------|---------------------------|----------|
| 2,6-DMP Acid 13335-71-2 | 100 | >100 | Selenastrum Capricornutum | 72 Hours |
|----------------------------|-----|------|---------------------------|----------|

12.2. Persistence and degradability

No biodegradation in the Ready Biodegradability assay after 28 days.

| Chemical Name | Percent | % Hydrolysis | pH | Time at 50 C |
|----------------------------|---------|--------------|------|--------------|
| 2,6-DMP Acid 13335-71-2 | 100 | 0 | 4.79 | |

12.3. Bioaccumulative potential

Data for similar component(s) given below.

| Chemical Name | Percent | Log Po/w |
|----------------------------|---------|----------|
| 2,6-DMP Acid 13335-71-2 | 100 | 0.91 |

12.4. Mobility in soil

Not determined.

12.5. Results of PBT or vPvB assessment

Chemical safety report is not required for this substance/product.

12.6. Other adverse effects

Do not allow undiluted material or large quantities to reach groundwater, bodies of water or sewer system.

Notes:

1. EC50: Concentration in water that produces 50% mortality in *Daphnia* sp.
2. LC50: Concentration in water that produces 50% mortality in fish.
3. EbC50/ErC50: Concentration in water that produces 50% inhibition of growth and in algae.

Section 13. Disposal considerations

13.1 Waste treatment methods

Waste Disposal Methods: Disposal should be made in accordance with country, federal, state and local regulations.

Section 14. Transport information

ADR, DOT, ICAO/IATA, IMDG/IMO

Status: Not regulated

- 14.1. UN Number: Not applicable
- 14.2. Proper shipping name: Not applicable
- 14.3. Hazard class: Not applicable
- 14.4. Packing group: Not applicable
- 14.5. Environmental hazard: Not applicable
- 14.6. Special Provisions: Not applicable

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14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

Section 15. Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

| Chemical Name | EINECS/ ELINCS | TSCA | DSL | NDSL | PICCS |
|----------------------------|----------------|------|-----|-------------|-------|
| 2,6-DMP Acid 13335-71-2 | - | - | - | Not listed. | - |

| Chemical Name | ENCS | ISHL | IECSC | AICS | KECL | New Zealand |
|----------------------------|------|------|-------|------|------|-------------|
| 2,6-DMP Acid 13335-71-2 | - | - | - | - | - | |

Legend

- EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- ISHL - Japan Industrial Safety and Health Law
- IECSC - China Inventory of Existing Chemical Substances
- AICS - Australian Inventory of Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances

Carcinogenicity Rating:

| Chemical Name | Percent | NTP: | IARC: | ACGIH: |
|---------------|---------|------------|------------|------------|
| 2,6-DMP Acid | 100 | Not Listed | Not Listed | Not Listed |

SARA 313 Information

| Chemical Name | Percent | SARA 313 Chemical: | CERCLA RQ/SARA EHS RQ (lbs): | SARA EHS TPQ (lbs): |
|---------------|---------|--------------------|------------------------------|---------------------|
| 2,6-DMP Acid | 100 | No | Not Applicable | Not applicable |

Immediate Health: Yes
Delayed Health: No
Fire: No
Sudden Pressure: No
Reactivity: No

RCRA Status: Not determined.

Proposition 65 Status: Does not contain chemicals known to the state of California to cause cancer or reproductive harm.

WHMIS Hazard Class: Not determined.

NFPA Rating:
 Health: 2

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Fire: 1
Reactivity: 0

Notes:

1. SARA = Superfund Amendments and the Reauthorization Act.
2. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act.
3. FIFRA = Federal Insecticide, Fungicide and Rodenticide Act.
4. TSCA = Toxic Substances Control Act.
5. EC = European Community.
6. WHMIS = Canadian Workplace Hazardous Materials Information System.
7. UN GHS = United Nations Globally Harmonized System for Hazard Identification.

15.2. Chemical safety assessment

Chemical safety assessment has not been conducted on the substance/product.

Section 16. Other information

Risk Phrases: R22 - Harmful if swallowed, R41 - Risk of serious damage to eyes, R52 - Harmful to aquatic organisms, R53 - May cause long-term adverse effects in the aquatic environment

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